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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603850F: Integrated Broadcast Service (DEM/VAL)							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	20.396	20.046	19.938	-	19.938	20.389	20.799	21.255	22.393	Continuing	Continuing
644778: Integrated Broadcast Service	20.396	20.046	19.938	-	19.938	20.389	20.799	21.255	22.393	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

## **A. Mission Description and Budget Item Justification**

The Integrated Broadcast Service (IBS) fulfills the warfighter's requirements for worldwide threat warning and situational awareness information with timely production and simultaneous dissemination of Intelligence, Surveillance, and Reconnaissance (ISR) derived combat information. It also provides target tracking data to support threat avoidance, targeting, force protection, and situational awareness. This information is continually refined in near real time by strategic, operational and tactical sensors.

This PE funds/has previously funded IBS system development as described below:

- A Common Interactive Broadcast (CIB) on UHF satellite channel using a Common Message Format (CMF) and a MIL-STD Demand Assigned Multiple Access (DAMA) compliant waveform and Line of Sight (LOS) using the Wideband Networking Waveform (WNW) and Joint Tactical Terminal (JTT).

- IBS-Network Services (IBS-NS) includes two Global IBS Network Servers (GINS) and four Theater Interface Nodes (TINs) to support the geographic Combatant Commanders; all built to validated warfighter requirements.

- Two GINS that receive data from each theater and integrate this data into a worldwide picture available to all network/broadcast users.

- Four regional TINs, where out-of-theater (and local) users not directly receiving the broadcast can receive the information broadcast on the CIB. Additionally, the TIN will receive and inject data into the CIB for producers without access to the theater CIB.

- An XML-based Common Message Format (CMF) Data Element Dictionary (DED) that defines IBS messages for broadcast of IBS information over available communications paths including the CIB and other Global Information Grid (GIG) networks.

- A Modular Advanced TRanslation Interchange with XML (MATRIX) Reformatter that provides a modular, platform-independent, multi-use translator to support migration with legacy radios and provide a long term solution for IBS Full Operational Capability (FOC) radio users.

Funds the development of an evolving suite of interoperable planning and decision support capabilities comprised of software, hardware and communication products. This project will identify and implement an open, scalable system architecture that will accommodate growth as the virtual world grows and cyber operations change.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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BA 4: Advanced Component Development & Prototypes (ACD&P)						
Activities also include studies and analysis to support both current program planning and execution and future program planning.						
B. Program Change Summary (\$ in Millions)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget		20.580	20.046	19.901	-	19.901
Current President's Budget		20.396	20.046	19.938	-	19.938
Total Adjustments		-0.184	-	0.037	-	0.037
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Other Adjustments		-0.184	-	0.037	-	0.037
Change Summary Explanation						
FY11: -\$184K for Congressional General Reduction.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2011	FY 2012	FY 2013
Title: Systems Engineering				0.438	0.378	0.378
Description: Provide systems engineering support and development of architectures for the IBS-NS.						
FY 2011 Accomplishments:						
Continued systems engineering support and development of architectures for the IBS-NS.						
FY 2012 Plans:						
Continue systems engineering support and development of architectures for the IBS-NS.						
FY 2013 Plans:						
Will continue systems engineering support and development of architectures for the IBS-NS.						
Title: IBS-NS (GINS/TINs) Development				13.374	15.382	16.777
Description: Continue the Phase II/System Development and Demonstration of the GINS and TINs efforts.						
FY 2011 Accomplishments:						

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603850F: <i>Integrated Broadcast Service (DEM/VAL)</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Continued development, integration and testing of the Spiral 4 GINS and TINs capabilities. <b>FY 2012 Plans:</b> Continue the integration and testing of the Spiral 4 release of the GINS and TINs capabilities.  Initiate advanced development of Spiral 4 capabilities. <b>FY 2013 Plans:</b> Will continue the integration and testing of the Spiral 4 release of the GINS and TINs efforts. Will transition Spiral 4 IBS-NS capability to sustainment.  Will complete advanced development of Spiral 4 release of GINS and TINs.				
<b>Title:</b> Test & Evaluation <b>Description:</b> Continue Test & Evaluation of the IBS system.  <b>FY 2011 Accomplishments:</b> Continued Test & Evaluation efforts. <b>FY 2012 Plans:</b> Conduct Integrated Test #1 and IBS Multi-Service Operational Test & Evaluation (MOT&E) <b>FY 2013 Plans:</b> Will continue Test and Evaluation		1.295	1.910	0.918
<b>Title:</b> Enterprise Systems Eng <b>Description:</b> Enterprise Systems Engineering/CMF Integration/CIB Integration  <b>FY 2011 Accomplishments:</b> Continued Enterprise Systems Engineering/CMF Integration/CIB Integration efforts. <b>FY 2012 Plans:</b> Conduct Enterprise Systems Engineering/CMF Integration/CIB Integration efforts. <b>FY 2013 Plans:</b> Will continue Enterprise Systems Engineering/CMF Integration/CIB Integration efforts.		0.700	0.700	0.700
<b>Title:</b> System Program Office		1.415	1.676	1.165

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C. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Description: Maintain a Program Mgmt Office, including program supervision, finance and acquisition strategy execution.											
FY 2011 Accomplishments: Maintained a Program Mgmt Office, including program supervision, finance and acquisition strategy execution.											
FY 2012 Plans: Maintain a Program Mgmt Office, including program supervision, finance and acquisition strategy execution.											
FY 2013 Plans: Maintain a Program Mgmt Office, including program											
Title: CIB (IW Phase 2 Controller)								1.874	-	-	
Description: Integrate and test capability that implements allocation of Satellite Communicatons (SATCOM) resources based on established policy/rules											
FY 2011 Accomplishments: Integrated and tested capability that implements allocation of SATCOM resources based on established policy/rules											
Title: CIB Engineering/Testing								1.300	-	-	
Description: Provide Common Interactive Broadcast (CIB) Engineering Testbed and CIB-related engineering/testing support.											
FY 2011 Accomplishments: Provided Common Interactive Broadcast (CIB) Engineering Testbed and CIB-related engineering/testing support.											
Accomplishments/Planned Programs Subtotals								20.396	20.046	19.938	
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPAF, PE 0305179F, Integrated Br...: Integrated Broadcast Service (IBS)	12.542	9.993	13.095	0.000	13.095	10.121	11.180	10.205	10.393	Continuing	Continuing
• O&M, PE 0305179F, Integrated...: Integrated Broadcast Service (IBS)	17.106	19.559	28.391	0.000	28.391	24.389	18.935	18.810	19.185	Continuing	Continuing

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<b>E. Acquisition Strategy</b> IBS used an evolutionary acquisition approach with a Program Definition/Risk Reduction phase (Spiral 1), followed by a full and open competition award to BTG/Titan/L-3Comm/L-3 Stratis to complete the Engineering, Manufacturing and Development (EMD) phase (Spiral 2-4).		
<b>F. Performance Metrics</b> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0603850F: Integrated Broadcast Service (DEM/VAL)	644778: Integrated Broadcast Service

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Air Force			<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603850F: <i>Integrated Broadcast Service (DEM/VAL)</i>	<b>PROJECT</b> 644778: <i>Integrated Broadcast Service</i>	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CMF MIL-STD 6018 Designation	1	2011	1	2011
IBS-NS (GINS/TINs) Development/Integration/Testing	1	2011	3	2013
CIB (IW Controller Phase II Controller)	4	2011	3	2012
CIB Uplink Integration/Testing	1	2011	1	2012
CIB Uplink Fielding	1	2012	3	2013
IBS-NS (GINS/TINs) Limited Deployment Decision	1	2012	1	2012
IBS Integrated Test #1	2	2012	2	2012
IBS-NS (GINS/TINS) Full Deployment Decision	2	2012	2	2012
IBS MOT&E	1	2013	1	2013
Advanced Development of Spiral 4 IBS-NS capability	4	2012	1	2014
IOC	2	2013	2	2013
MDA Final Program Review	3	2013	3	2013
IBS-NS (GINS/TINs) Transition to Sustainment	3	2013	3	2013
CIB Planning Tool Development	1	2014	1	2016
Modernization of IBS-NS	1	2014	4	2017